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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,029	02/06/2002	Robert B. Smith	10019538-1	7244

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EXAMINER

RAY, GOPAL C

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/068,029	SMITH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gopal C. Ray	2111	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 10-13, 16-19, 22-25, 27-30, 32-35, 37-40 and 42-44 is/are rejected.
- 7) ☒ Claim(s) 2,3,8,9,14,15,20,21,26,31,36 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

1. Claims 1-44 are presented for examination.
2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:  
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 4, 6, 7, 12, 13, 16, 18, 19 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,815,082 issued to Welmer in view of US Patent 6,785,012 issued to Okazawa.

As per claim 1, the reference of Welmer teaches "transmitting at least one status request message over the data bus to a first plurality of devices coupled to the data bus" in Fig. 1; col. 1, lines 7-15 and col. 10, lines 13-20 and "receiving over the data bus a status indicator message" in Fig. 1; col. 1, lines 15-17 and col. 10, lines 21-23.

The reference of Welmer fails to expressly teach the limitation of "receiving over the data bus a status indicator message including a plurality of status indicators indicating statuses of the first plurality of devices". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by Okazawa. The reference of Okazawa teaches the feature in abstract, lines 6-14. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Welmer to receive a plurality of status indicators indicating statuses of the first plurality of devices because the feature was well known and within the skill of an ordinary person at the time the invention was

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made. The reference of Welmer already receives a status indicator message from a device and receiving a plurality of status indicators indicating statuses of the first plurality of devices would make Welmer's system more efficient by simultaneously knowing the statuses of a plurality of devices which would save time and increase flexibility of the system.

As per claim 4, the reference of Welmer teaches "wherein the data bus comprises a serial data bus" in Fig. 1, element 16 and col. 3, lines 15-16.

As per claims 6 and 7, the reference of Welmer teaches the added limitations in col. 1, lines 35-38.

As per claim 12, the claim is rejected for similar reasons as discussed in the rejection of claim 1 with the exception of the limitation, "a protocol associated with the serial data bus". However, the reference of Welmer teaches the feature in col. 1, lines 23-38.

As per claim 13, the claim recites an apparatus which is written in "means plus function" form. The apparatus can be used to perform the steps in method claim 1. In teaching the construction and use of the device, US Patent 5,815,082 issued to Welmer teaches a corresponding apparatus.

As per claims 16, 18 and 19, the added limitations of the claims are rejected for the same reasons as discussed in the rejection of claims 4, 6 and 7 respectively.

As per claim 24, the claim recites an apparatus which is written in "means plus function" form. The apparatus can be used to perform the steps in method claim 12. In

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teaching the construction and use of the device, US Patent 5,815,082 issued to Welmer teaches a corresponding apparatus.

4. Claims 25, 29, 30, 34, 35, 39, 40 and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 4,855,730 issued to Venners et al. in view of US Patent 6,785,012 issued to Okazawa.

As per claim 25, the reference of Venners et al. teaches "receiving at least one status request message over the data bus from a master device" in col. 4, lines 50-59 and transmitting to the master device over the data bus a status indicator message" in col. 2, lines 5-15 and col. 4, lines 50-59.

The reference of Venners et al. fails to expressly teach the limitation of "transmitting to the master device over the data bus a status indicator message including a plurality of status indicators indicating statuses of a plurality of slave devices coupled to the data bus". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by Okazawa. The reference of Okazawa teaches the feature in abstract, lines 6-14. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Venners et al. to transmit to the master device over the data bus a status indicator message including a plurality of status indicators indicating statuses of a plurality of slave devices coupled to the data bus because the feature was well known and within the skill of an ordinary person at the time the invention was made. The reference of Venners et al. already receives a status indicator message from a device and receiving a plurality of status indicators indicating statuses of a

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plurality of slave devices would make Venners' system more efficient by simultaneously knowing the statuses of a plurality of slave devices which would save time and increase flexibility of the system.

As per claims 29 and 30, the reference of Venners et al teaches the added limitations in col. 4, lines 54-56.

As per claim 34, the claim is rejected for similar reasons as discussed in the rejection of claim 25 with the exception of the limitation, "a protocol associated with the serial data bus". However, the reference of Venners et al. teaches the feature in col. 4, lines 54-56.

As per claim 35, the claim recites an apparatus which is written in "means plus function" form. The apparatus can be used to perform the steps in method claim 25. In teaching the construction and use of the device, the combination of US Patent 4,855,730 issued to Venners et al. and US Patent 6,785,012 issued to Okazawa teaches a corresponding apparatus.

As per claims 39 and 40, the added limitations of the claims are rejected for the same reasons as discussed in the rejection of claims 29 and 30 respectively.

As per claim 44, the claim recites an apparatus which is written in "means plus function" form. The apparatus can be used to perform the steps in method claim 34. . In teaching the construction and use of the device, the combination of US Patent 4,855,730 issued to Venners et al. and US Patent 6,785,012 issued to Okazawa teaches a corresponding apparatus.

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5. Claims 5 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,815,082 issued to Welmer in view of US Patent 6,785,012 issued to Okazawa and further in view of US Patent 5,631,850 issued to Tanaka et al.

As per claim 5, the claim is rejected for the same reasons as discussed in the rejection of claim 4 with the exception of "wherein the data bus comprises an I2C bus". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by Tanaka et al. The reference of Tanaka et al. teaches the feature in Fig. 27. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement I2C bus in the system of Welmer to obtain the claimed invention because the reference of Welmer teaches D2B bus in Fig. 1, element 16 and the D2B bus is derived from I2C.

As per claim 17, the added limitation of the claim is rejected for the same reasons as discussed in the rejection of claim 5.

6. Claims 27, 28, 37 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 4,855,730 issued to Venners et al. in view of US Patent 6,785,012 issued to Okazawa and further in view of US Patent 5,631,850 issued to Tanaka et al.

As per claims 27 and 28, the claims are rejected for the same reasons as discussed in the rejection of claim 25 with the exception of "wherein the serial data bus comprises an I2C bus". However, the above feature was well known to one of ordinary skill in the art at the time the invention was made as evidenced by Tanaka et al. The reference of Tanaka et al. teaches the feature in Fig. 27. Therefore, it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to implement I2C bus in the system of Venners et al. to obtain the claimed invention because implementation of such bus is within the skill of an ordinary person in the art at the time the invention was made. I2C bus is a commonly used serial data bus which is easy to connect. It can be connected to integrated circuits as well as peripheral semiconductor devices and uses well known data bus protocol.

As per claims 37 and 38, the added limitations of the claims are rejected for the same reasons as discussed in the rejection of claims 27 and 28 respectively.

7. Claims 10, 11, 22 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5,815,082 issued to Welmer in view of US Patent 6,785,012 issued to Okazawa and further in view of US Patent 4,106,091 issued to Hepworth et al.

As per claims 10 and 11, the claims are rejected for the same reasons as discussed in the rejection of claim 1 with the exception of "wherein the status indicators comprise bits" (claim 10) and "wherein the status indicators comprise IRQ status bits" (claim 11). However, the above features were well known to one of ordinary skill in the art at the time the invention was made as evidenced by Hepworth et al. The reference of Hepworth et al. teaches the features in col. 8, lines 33-35. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above features in the system of Welmer to obtain the claimed invention because the that would allow the system of Welmer to recognize the status including IRQ of any unit or peripheral device by reading bits of a status register.



As per claims 22 and 23, the added limitations of the claims are rejected for the same reasons as discussed in the rejection of claims 10 and 11 respectively.

8. Claims 32, 33, 42 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 4,855,730 issued to Venners et al in view of US Patent 6,785,012 issued to Okazawa and further in view of US Patent 4,106,091 issued to Hepworth et al.

As per claims 32 and 33, the claims are rejected for the same reasons as discussed in the rejection of claim 25 with the exception of "wherein the status indicators comprise bits" (claim 32) and "wherein the status indicators comprise IRQ status bits" (claim 33). However, the above features were well known to one of ordinary skill in the art at the time the invention was made as evidenced by Hepworth et al. The reference of Hepworth et al. teaches the features in col. 8, lines 33-35. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the above features in the system of Venners et al to obtain the claimed invention because the that would allow the system of Venners et al. to recognize the status including IRQ of any unit or peripheral device by reading bits of a status register.

As per claims 42 and 43, the added limitations of the claims are rejected for the same reasons as discussed in the rejection of claims 32 and 33 respectively.

9. Claims 2, 3, 8, 9, 14, 15, 20, 21, 26, 31, 36 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening

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claims. The claims are allowable because each claim recites at least an additional feature, e.g., "addressing a second plurality of devices coupled to the data bus using a primary address shared by the second plurality of devices ..." (claim 2, lines 1-10), etc. in combination with other claimed elements of the respective parent claims which the prior art on record does not show or fairly teach. If applicants are aware of any better prior art than those are cited, they are required to bring the prior art to the attention of the examiner.

10. Applicant's arguments filed on 10/5/2004 have been fully considered but are moot in view of the new grounds of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gopal C. Ray whose telephone number is (571) 272-3631. The examiner can normally be reached on Monday - Friday from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart, can be reached on (571) 272-3632. The new fax phone number for this Group is (571) 272-3632.

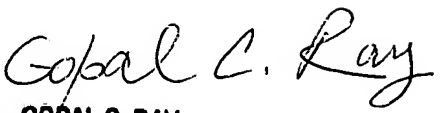
Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [[mark.rinehart@uspto.gov](mailto:mark.rinehart@uspto.gov)].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record

includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC central telephone number is (571) 272-2100.

Lastly, paper copies of cited U.S. Patents and Patent Application Publications ceased to be mailed to applicants with office actions as of June 2004. Paper copies of Foreign Patents and Non-Patent Literature will continue to be included with office actions. These cited U.S. Patents and Patent Application Publications are available for download via Office's PAIR. As an alternate source, all U.S. Patents and Patent Application Publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov)), from the office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. Patent or Patent Application Publications will not be granted.

  
**GOPAL C. RAY**  
**PRIMARY EXAMINER**  
**GROUP 2800**